

### **REMARKS**

Favorable reconsideration and allowance of the present application are respectfully requested in view of the foregoing amendments and the following remarks.

Currently, claims 46-61 are pending in the present application, including independent claim 46. Minor amendments were made to claims 48, 57, and 61 as well as to the specification and drawings in an Amendment filed by Applicants on March 28, 2005.

Independent claim 46, for instance, is directed to a method for detecting the presence of a proteinase enzyme in a chronic wound of a human or an animal. The method comprises collecting a sample of fluid from the chronic wound of the human or the animal. The sample is exposed to a signal element bound to a target antibody, the target antibody being bindable to the proteinase enzyme to form a proteinase enzyme/target antibody complex. The proteinase enzyme/target antibody complex is exposed to a capture antibody to form a proteinase enzyme/target antibody complex/capture antibody conjugate. The proteinase enzyme is identified by determining the presence or absence of a detectable or measurable manifestation of the signal element. This identification allows for the selection of a treatment for the chronic wound that is effective for treating the identified proteinase enzyme.

In the Final Office Action of January 26, 2005, independent claim 46 was rejected under 35 U.S.C. § 102(b) as being anticipated by either U.S. Patent No. 5,736,341 to Sorsa, et al. or U.S. Patent No. 6,143,506 to Golub, et al. In Applicants' Amendment filed on March 28, 2005, Applicants pointed out in detail that the methods for diagnosing periodontal disease taught by Sorsa, et al. and Golub, et al. do not disclose the

presently claimed method for detecting the presence of a proteinase enzyme in a chronic wound of a human or an animal. However, a recent Advisory Action mailed on April 18, 2005 indicated that the proposed amendments filed after the final rejection would not be entered.

In response, Applicants are filing this submission with an RCE. In addition, Applicants wish to point out additional differences, known to one of ordinary skill in the art to which the present detection method pertains, between the methods for diagnosing periodontal disease taught by Sorsa, et al. and Golub, et al. and the method for detecting the presence of a proteinase enzyme in a chronic wound of a human or animal as presently claimed. Specifically, a "wound" is clinically defined as "an injury or damage, usually restricted to those caused by physical means with disruption of normal continuity of structures." (See Exhibit A, pages from Merck Medicus, Dorland's Medical Dictionary). Synonyms for "wound" include "injury" and "trauma." Additionally, "chronic" is clinically defined as "persisting over a long period of time." (Exhibit A).

In contrast, "periodontitis" is clinically defined as "inflammatory reaction of the tissues surrounding a tooth (periodontium), usually resulting from the extension of gingival inflammation (gingivitis) into the periodontium." (Exhibit A). In short, a chronic wound (an injury or trauma that persists over a long period of time) is quite distinct from "periodontitis," a disease of the tissues surrounding the teeth. Thus, as described in Applicants' Amendment of March 28, 2005, an MMP sensor for detecting gum disease in no way teaches that such a sensor could be used in chronic wound therapeutics. Accordingly, for at least the reasons set forth in the Amendment of March 28, 2005 and

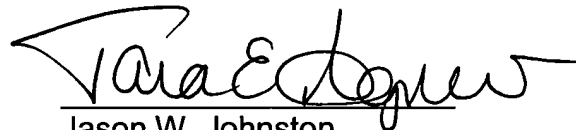
in this Supplemental Response, Applicants respectfully submit that the present claims patentably define over Sorsa, et al. and Golub, et al.

As such, at least for the reasons set forth herein, Applicants respectfully submit that the present application is in complete condition for allowance and favorable action, is therefore requested. Examiner Swope is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this Response.

Please charge any additional fees required by this Response to Deposit Account No. 04-1403.

Respectfully requested,

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## W

wing — Wycillin

**wing** (wing) (wing) [L. *ala*] 1. either of the paired anterior appendages of birds, which are modified for flight. 2. a structure or part resembling the wing of a bird; called also *ala*.

wing of central lobule, *ala lobuli centralis*.

great wing of sphenoid bone, greater wing of sphenoid bone, *ala major ossis sphenoidalis*.

wing of ilium, *ala ossis ilii*.

wing of Ingrassia, *ala minor ossis sphenoidalis*.

lateral wing of sacrum, *pars lateralis ossis sacri*.

lesser wing of sphenoid bone, *ala minor ossis sphenoidalis*.

major wing of sphenoid bone, *ala major ossis sphenoidalis*.

minor wing of sphenoid bone, *ala minor ossis sphenoidalis*.

wing of nose, *ala nasi*.

orbital wing of sphenoid bone, small wing of sphenoid bone, *ala minor ossis sphenoidalis*.

wings of sphenoid bone, the laterally projecting processes of the sphenoid bone; see *ala major ossis sphenoidalis* *major ossis sphenoidalis* and *ala minor ossis sphenoidalis*.

temporal wing of sphenoid bone, *ala major ossis sphenoidalis*.

wing of vomer, *ala vomeris*.

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**screw worm**, see screwworm.

**serpent worm**, Dracunculus medinensis.

**spinyheaded worm**, Acanthocephala.

**stomach worm**, any parasitic worm that lives in the stomach of an animal, such as species of Haemonchus, Ostertagia, and Teladorsagia.

**thorny-headed worm**, acanthocephalan.

**tongue worm**, pentastome.

**trichina worm**, Trichinella.

**wire worm**, Haemonchus contortus.

**Wormley's test (Worm-ley's test)** (worm'l[emacr]z) [Theodore George Wormley, American chemist, 1826–1897] see under test.

**wormseed (worm-seed)** (worm's[emacr]d) 1. Artemisia maritima. 2. santonica (def. 2). 3. Chenopodium maritima.

**wormwood (worm-wood)** (worm'wood) 1. Artemisia absinthium. 2. absinthium (def. 2).

**Woulfe's bottle (Woulfe's bottle)** (woolfs) [Peter Woulfe, English chemist, 1727–1803] see under bottle.

**wound (wound)** (w[ldbomacr]nd) [L. vulnus] an injury or damage, usually restricted to those caused by physical means with disruption of normal continuity of structures. Called also injury and trauma.

**aseptic wound**, one which is not infected with pathogens.

**blowing wound**, open pneumothorax.

**contused wound**, nonpenetrating w.

**incised wound**, one made by a cutting instrument.

**lacerated wound**, laceration.

**nonpenetrating wound**, one in which there is no disruption of the skin but there is injury to underlying structures. See also contusion.

**open wound**, one that communicates with the atmosphere by direct exposure.

**penetrating wound**, one caused by a sharp, usually slender object, such as a nail or ice pick, which passes through the skin into the underlying tissues. Called also puncture w.

**perforating wound**, a penetrating wound which extends into a viscus or bodily cavity.

**puncture wound**, penetrating w.

**septic wound**, one that is infected with pathogens.

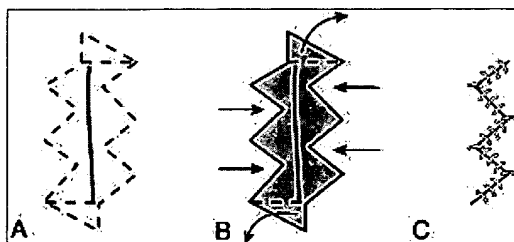
**seton wound**, one which enters and exits on the same side of the injured part.

**subcutaneous wound**, one which involves only the skin and subcutaneous tissue.

**sucking wound**, a penetrating wound of the chest through which air is drawn in and out. See also open pneumothorax.

**tangential wound**, an oblique glancing wound which results in one edge being undercut.

**W-plasty (W-plas-ty)** a technique in plastic surgery used mainly in the repair of straight scars that require the redistribution of tension. It consists of excising a series of consecutive small triangular areas of tissue on each side of the wound or scar and imbricating the resultant triangular flaps.



**Figure W-4—W-plasty.** (A), lines of excision; (B), removal of triangular end flaps and apposition of segments; (C), after suturing.

**wrapping (wrapping)** (rap'ing) the act or process of putting a cover around a thing.

**fundic wrapping**, fundoplication.

**Wright blood group (Wright blood group)** [from the name of the English propositus family first reported on in 1953] see under blood group.

**Wright's stain (Wright's stain)** (r[i]macr[tz]) [James Homer Wright, American pathologist, 1869–1928] see under Stains and Staining Methods.

**Wright's syndrome (Wright's syndrome)** (r[i]macr[tz]) [Irving Sherwood Wright, American physician, born 1901] see under syndrome.

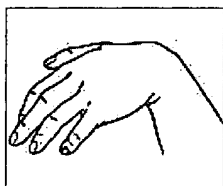
**Wrisberg's cartilage, etc. (Wris-berg's cartilage, etc.)** (ris'b[schwa]rgz) [Heinrich August Wrisberg, German anatomist, 1739–1808] see cartilago cuneiformis, ganglia cardiaca, ligamentum meniscofemorale posterius, nervus intermedius, nervus cutaneus brachii medialis, and tuberculum cuneiforme.

**wrist (wrist)** (rist) 1. carpus, defs. 1 and 3. 2. articulatio radiocarpalis.

**SLAC wrist**, a wrist affected by scapholunate advanced collapse (SLAC).

**tennis wrist**, tenovaginitis of the tendons of the wrist in tennis players.

**wristdrop (wrist-drop)** (rist'drop) a condition resulting from paralysis of the extensor muscles of the hand and fingers. Called also carpoptosis and drop hand.



**Figure W-5—Wristdrop.**

**writing (writ-ing)** (r[i]macr[t]ing) the inscription of letters or other symbols, and of words, phrases, and sentences, so that they may be perceived by the eyes or, by the blind, through the fingertips.



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## C

[chromopsia](#) — [chylous](#)**chromopsia** (chro-mop'sia) (kro-mop'se-[schwa]) [chromatopsia](#).**chromoptometer** (chro-mop-tom-e-ter)(kro"mop-tom'[schwa]-t[schwa]r) [chromatoptometer](#).**chromoretinography** (chro-mo-ret-i-nog-ra-phy)(kro"mo-ret'[ibreve]-nog'r[schwa]-fe) [*chromo-* + *retina* + *-graphy*] color photography of the retina.**chromorhinorrhea** (chro-mo-rhi-nor-rhea) (kro"mo-ri"no-re'[schwa]) [*chromo-* + *rhinorrhea*] the discharge of a pigmented secretion from the nose.**chromosantonin** (chro-mo-san-to-nin) (kro"mo-san'to-nin) yellow santonin; an isomeric form produced when santonin is exposed to sunlight.**chromoscope** (chro-mo-scope) (kro'mo-sk[omacr]p) [chromatoscope](#).**chromoscopy** (chro-mos-co-py) (kro-mos'k[schwa]-pe) [chromatoscopy](#).**chromosomal** (chro-mo-so-mal) (kro"mo-s[omacr]m'[schwa]l) pertaining to chromosomes.

**chromosome** (chro-mo-some) (kro'mo-s[omacr]m) [*chromo-* + *-some*] 1. in animal cells, a structure in the nucleus containing a linear thread of DNA, which transmits genetic information and is associated with RNA and histones; during cell division, the material (chromatin) composing the chromosome is compactly coiled, making it visible with appropriate staining and permitting its movement in the cell with minimal entanglement. Each organism of a species normally has a characteristic number of chromosomes in its somatic cells, 46 being the number normally present in man, including the two (XX or XY) which determine the sex of the organism. See illustration. 2. in bacterial genetics, a closed circle of double-stranded DNA that contains the genetic material of the cell and is attached to the cell membrane; the bulk of the material forms a compact bacterial nucleus (called also *chromatinic body*).

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accessory and B c.

**telocentric chromosome**, a chromosome with a terminal centromere; not normally found in humans.

**W chromosomes**, the sex chromosomes of certain insects, birds, and fishes, in which the female is heterogametic (i.e., has a W and a Z chromosome) and the males are homogametic (having only Z chromosomes).

**X chromosome**, the female sex chromosome, being the differential sex chromosome carried by half the male gametes and all female gametes in man and other male-heterogametic species.

**Y chromosome**, the male sex chromosome, being the differential sex chromosome carried by half the male gametes and none of the female gametes in man and in some other male-heterogametic species in which the homologue of the X chromosome has been retained.

**yeast artificial chromosome**, (YAC) a DNA segment, containing up to 1000 kilobase pairs and having a centromere and telomere, introduced into the yeast *Saccharomyces cerevisiae*; it allows the cloning and isolation of much larger DNA segments than is possible using bacterial cloning.

**Z chromosomes**, see W c's.

**chromospermism** (chro-mo-sperm-ism) (kro"mo-sp[schwa]r'miz-[schwa]m) [chromo- + sperm] a colored condition of the sperm.

**chromotherapy** (chro-mo-ther-a-py) (kro"mo-ther'[schwa]-pe) [chromo- + therapy] the therapeutic use of light of restricted areas of the spectrum; called also beam therapy.

**chromotoxic** (chro-mo-tox-ic) (kro"mo-tok'sik) [chromo- + toxic] destructive to hemoglobin or due to the destruction of hemoglobin.

**chromotrichia** (chro-mo-trich-ia) (kro"mo-trik'e-[schwa]) [chromo- + trich- + -ia] coloration of the hair.

**chromotrichial** (chro-mo-trich-i-al) (kro"mo-trik'e-[schwa]l) pertaining to the coloration of the hair.

**chromotropic** (chro-mo-trop-ic) (kro"mo-trop'ik) [chromo- + -tropic] turning to or attracting color or pigment.

**chromoureteroscopy** (chro-mo-ure-ter-os-co-py) (kro"mo-u-re"t[schwa]r-os'k[schwa]-pe) chromocystoscopy.

**chromourinography** (chro-mo-uri-nog-ra-phy) (kro"mo-u'r[ibreve]-nog'r[schwa]-fe) diagnosis by measuring the intensity of color and the time of appearance in the urine after injection of a dye.

**chronaxie** (chro-nax-ie) (kro'nak-se) chronaxy.

**chronaxy** (chro-naxy) (kro'nak-se) [chron- + Gr. *axios* fit] the minimum time an electric current must flow at a voltage twice the rheobase to cause a muscle to contract.

**chronic** (chro-nic) (kron'ik) [L. *chronicus*, from Gr. *chronos* time] persisting over a long period of time.

**chronicity** (chro-nic-i-ty) (kro-nis'[ibreve]-te) the quality of being chronic.

**chron(o)-** (chron(o)-) [Gr. *chronos* time] a combining form denoting relationship to time.





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## P

[perinephrial](#) — [periphacitis](#)

**perinephrial** (peri-neph-ri-al) (per"[ibreve]-nef're-[schwa]) pertaining to the perinephrium.

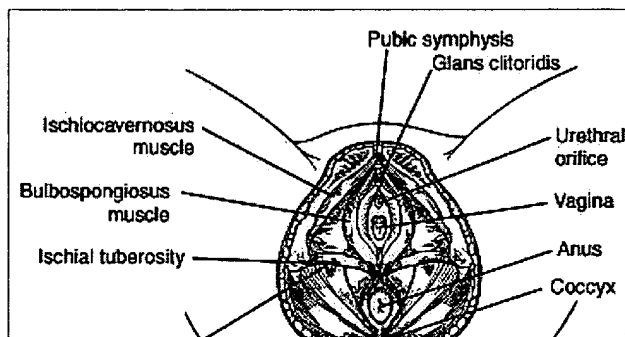
**perinephric** (peri-neph-ric) (per"[ibreve]-nef'rik) surrounding the kidney; called also *perirenal*.

**perinephritic** (peri-ne-phrit-ic) (per"[ibreve]-n[schwa]-frit'ik) pertaining to or characterized by perinephritis.

**perinephritis** (peri-ne-phri-tis) (per"[ibreve]-n[schwa]-fri'tis) [*peri-* + *nephro-* + *-itis*] inflammation of the perinephrium; it is marked by fever, local pain, and tenderness on pressure.

**perinephrium** (peri-neph-ri-um) (per"[ibreve]-nef're-[schwa]m) [*peri-* + Gr. *nephros* kidney] the peritoneal envelope and other tissues around the kidney.

**perineum** (peri-ne-um) (per"[ibreve]-ne-[schwa]m) [Gr. *perinaion*, *perineos* the space between the anus and scrotum] [TA] 1. the pelvic floor and the associated structures occupying the pelvic outlet; it is bounded anteriorly by the pubic symphysis, laterally by the ischial tuberosities, and posteriorly by the coccyx. 2. the region between the thighs, bounded in the male by the scrotum and anus and in the female by the vulva and anus.



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**periodontia** (peri-odon-tia) (per'e-o-don'sh[schwa]) 1. plural of periodontium. 2. periodontics.

**periodontics** (peri-odon-tics) (per'e-o-don'tiks) [*peri- + odont- + -ic*] that branch of dentistry dealing with the study and treatment of diseases of the periodontium.

**periodontist** (peri-odon-tist) (per'e-o-don'tist) a dentist who specializes in periodontics.

**periodontitis** (peri-odon-ti-tis) (per'e-o-don-ti'tis) [*peri- + odont- + -itis*] inflammatory reaction of the tissues surrounding a tooth (periodontium), usually resulting from the extension of gingival inflammation (gingivitis) into the periodontium. Periodontitis has been classified in five clinical types: prepubertal, juvenile, rapidly progressive, and adult p., and necrotizing ulcerative gingivoperiodontitis. Called also alveolodental osteoperiostitis, cementoperiostitis, and paradentitis.

**adult periodontitis**, the most common form of periodontitis, usually occurring after the age of 35, and usually manifested by slow progression of tissue destruction, which may ultimately result in loss of the teeth.

**apical periodontitis**, inflammatory reaction of the tissues surrounding the root of a tooth.

**chronic apical periodontitis**, periapical granuloma.

**juvenile periodontitis**, a rare form of periodontitis that has an onset at puberty, is more common in females, and is manifested by deep periodontal pockets, usually involving the first molars and incisors. It may be associated with rapidly progressive periodontitis in later life. Called also paradentosis and periodontosis.

**marginal periodontitis**, a chronic destructive inflammatory periodontal disease that begins as a simple marginal gingivitis and may migrate along the tooth toward the apex, producing periodontal pockets, usually with pus formation, and destruction of the periodontal and alveolar structures, causing the teeth to become loose. Called also simple p., chronic suppurative pericementitis, Fauchard disease, pyorrhea, pyorrhea alveolaris, Riggs' disease, and Schmutz pyorrhea.

**prepubertal periodontitis**, a rare form of periodontitis, probably having an onset soon after eruption of the primary teeth. It occurs in a localized form that involves only some teeth, and in a generalized form that causes rapid destruction of alveolar bone and may or may not affect the permanent teeth.

**rapidly progressive periodontitis**, generalized periodontitis occurring after puberty and before the age of 30 to 35 in those who may or may not have had juvenile periodontitis, characterized by severe and rapid bone destruction, which may progress to abscess formation and tooth loss, or may enter a short or prolonged dormant period.

**simple periodontitis**, periodontitis sim'plex, marginal p.

**periodontium** (peri-odon-ti-um) (per'e-o-don'she-[schwa]m) [TA] pl. periodontia [*peri- + Gr. odous tooth*] 1. the tissues that invest or help to invest and support the teeth, including the periodontal ligament, gingivae, cementum, and alveolar and supporting bone. 2. periodontal ligament. Called also alveolar periosteum, odontoperiosteum, paradentium, and peridontium.

